

ABSTRACT OF THE DISCLOSURE

An igniter for a gas turbine engine. An igniter generates a plasma, or spark, somewhat similar to an automotive spark plug. In the invention, an auxiliary electrode is provided, which is embedded in and covered by a solid insulator. During initial phases of operation, no part of the plasma generated contacts the auxiliary electrode. However, eventually, the covering insulation is eroded by the plasma, and the auxiliary electrode becomes exposed and available as a return path for the plasma. The igniter is constructed so that, when this erosion occurs, the lifetime of the igniter is near its end. Detection of this erosion, as by detecting the new current in the auxiliary ground electrode, indicates the approaching end-of-lifetime.